

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ms. Susan A. Wolfe on January 14, 2010.

The application has been amended as follows:

In the claims:

claim 14, line 19 – replaced “an elastic conducting means” with --a helical spring--;

claim 15 – cancelled;

claim 22, line 3 – added --being-- after “projection” and replaced “elastic conducting means can bear” with --helical spring bears--;

claim 25, line 3 – added --for-- after “means”; and,

claim 28, line 1 – replaced “27” with --14--.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

regarding claim 14, the prior art of record does not disclose or suggest a mechanical and electrical connection system comprising a helical spring in direct mechanical and electrical contact with an axial end extension of a driving shaft and a driven shaft (lines 19-21) in combination with a radial clearance provided between surfaces of a second annular shoulder of a cylindrical coupling and an annular groove of the driven shaft and an end of the driven shaft capable of making direct contact with the end of the driving shaft (line 25-26). The closest prior art, Boyle et al., 2002/0013085, teaches in Figure 9, a driven shaft 22' and a helical spring between the driven shaft 22' and a driving shaft 16'. However, there no indication that the helical spring provides mechanical and electrical contact between the driving shaft and the driven shaft. The driven shaft 22' is limited from motion by the detents 28b and thus there is no evidence that the driven shaft 22' makes contact with the driving shaft 16'. Further, since the driving shaft 16' is made of plastic, the driving shaft 16' would not provide "electrical" contact with the helical spring. Moulin, 3,224,082, teaches a helical spring between two shafts. However there is no motivation to provide a radial clearance between the driven shaft and the cylindrical coupling nor does Moulin provide any evidence that the driving shaft makes direct contact with the driven shaft. Rump et al., 4,434,859, teaches contact between shafts. However, Rump et al. lack a spring, an annular groove on each shaft engaging complementary shoulders, and the radial clearance between the second annular shoulder and the annular groove of the driven shaft. There's no motivation to include these features without given the applicant's own disclosure. Jones, Jr., 3,326,303, teach a spring between two shafts. However, there's

no motivation to include the annular grooves and complementary shoulders as well as include the radial clearance between the annular groove of the driven shaft and the second annular shoulder of the cylindrical coupling; and,
regarding claims 16-26 and 28, these claims depend from claim 14.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 571-272-7083. The examiner can normally be reached from 9:30AM-6:00PM. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached at 571-272-7087.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/E. G./

Examiner, Art Unit 3679

January 28, 2010

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679